

TITLE OF THE INVENTION

USES OF ALPHA-CONOTOXIN PEPTIDES

ABSTRACT OF THE DISCLOSURE

5 The present invention relates to the use of α -conotoxin peptides having the general formula
Xaa₁-Xaa₂-Cys-Cys-Xaa₃-Xaa₄-Pro-Xaa₅-Cys-Xaa₆-Xaa₇-Xaa₈-Xaa₉-Xaa₁₀-Xaa₁₁-Xaa₁₂-Cys (SEQ
ID NO:1) for treating disorders regulated at neuronal nicotinic acetylcholine receptors. Such
disorders include, but are not limited to, cardiovascular disorders, gastric motility disorders, urinary
incontinence, nicotine addiction, mood disorders (such as bipolar disorder, unipolar depression,
10 dysthymia and seasonal effective disorder) and small cell lung carcinoma, as well as the localization
of small cell lung carcinoma. In this formula, Xaa₁ is des-Xaa₁, Tyr, mono-iodo-Tyr or di-iodo-Tyr,
Xaa₂ is any amino acid, Xaa₃ is any amino acid, Xaa₄ is any amino acid, Xaa₅ is any amino acid;
Xaa₆ is any amino acid, Xaa₇ is any amino acid, Xaa₈ is any amino acid, Xaa₉ is des-Xaa₉ or any
amino acid, Xaa₁₀ is des-Xaa₁₀ or any amino acid, Xaa₁₁ is des-Xaa₁₁ or any amino acid and Xaa₁₂
15 is des-Xaa₁₂ or any amino acid. Disulfide linkages exist between the first and third cysteines and
the second and fourth cysteines. Pro may be replaced with hydroxy-Pro. The C-terminus may
contain a hydroxyl or an amide group, preferably an amide group.